

Cutting Tool and Machine Tool Accessory Manufacturing: 2002

Issued January 2005

EC02-311-333515 (RV)

2002 Economic Census

Manufacturing

Industry Series



USCENSUSBUREAU

Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



CONTENTS

Introduction to the Economic Census	v
Manufacturing	ix

Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002	2
3. Detailed Statistics by Industry: 2002	3
4. Industry Statistics by Employment Size: 2002.....	4
5. Industry Statistics by Primary Product Class Specialization: 2002	5
6a. Products Statistics: 2002 and 1997	6
6b. Product Class Shipments for Selected States: 2002 and 1997 .	9
7. Materials Consumed by Kind: 2002 and 1997.....	10

Appendixes

A. Explanation of Terms	A-1
B. NAICS Codes, Titles, and Descriptions	B-1
C. Methodology	C-1
D. Geographic Notes	--
E. Metropolitan and Micropolitan Statistical Areas	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997	F-1

-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)					
333515, Cutting tool and machine tool accessory manufacturing	2002...	1 803	1 890	39 606	1 536 037	27 467	53 289	942 178	3 332 990	1 492 222	4 859 363	'196 719
	2001...	N	N	43 263	1 568 873	30 386	60 335	968 307	3 146 723	1 582 651	4 766 063	202 053
	2000...	N	N	46 182	1 721 515	32 653	65 404	1 066 846	3 685 178	1 945 275	5 597 631	283 320
	1999...	N	N	45 898	1 634 654	32 487	66 504	1 030 322	3 299 257	1 882 503	5 197 795	300 107
	1998...	N	N	49 706	1 712 647	35 823	72 030	1 088 153	3 709 128	1 930 388	5 531 361	301 136
	1997...	1 820	1 919	48 017	1 644 426	34 725	70 639	1 041 204	3 614 484	1 806 004	5 379 842	275 851

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
333515, Cutting tool and machine tool accessory manufacturing												
United States	2	1 890	441	39 606	1 536 037	27 467	53 289	942 178	3 332 990	1 492 222	4 859 363	196 719
Arizona	7	23	1	147	5 002	108	194	3 318	10 082	5 096	15 164	240
California	2	186	31	2 583	91 238	1 982	3 587	60 985	225 554	73 968	297 219	15 760
Colorado	4	17	1	110	4 044	75	126	2 535	8 810	2 521	11 427	339
Connecticut	3	77	18	1 139	41 764	803	1 608	26 141	77 938	34 186	113 605	3 124
Florida	1	44	12	690	26 063	437	713	13 115	57 111	30 254	86 919	2 607
Illinois	3	167	29	3 487	132 516	2 444	4 768	84 517	289 280	152 312	423 708	22 342
Indiana	2	55	14	795	29 579	545	1 072	18 786	55 777	25 886	85 269	3 090
Iowa	3	18	5	462	16 358	316	533	9 064	32 886	21 729	55 620	1 573
Kansas	1	10	2	165	6 007	107	203	3 650	30 519	7 089	37 201	873
Kentucky	5	14	3	152	6 069	113	231	4 413	12 885	8 900	21 806	900
Massachusetts	2	57	13	1 222	51 150	950	2 023	38 359	92 645	40 304	134 180	7 187
Michigan	2	347	106	7 368	295 984	5 180	10 312	189 132	610 723	269 164	882 778	30 665
Minnesota	1	39	4	551	21 033	388	671	13 954	39 834	17 677	60 732	1 312
Missouri	2	29	8	1 559	59 519	968	1 794	29 111	99 113	54 667	156 206	4 317
New Hampshire	2	11	2	129	4 411	86	153	3 117	10 148	3 346	13 573	123
New Jersey	1	34	6	437	19 044	313	668	12 665	71 759	18 276	90 483	1 517
New York	4	80	14	1 020	40 872	696	1 381	24 779	86 788	37 402	124 601	3 596
North Carolina	—	28	7	776	26 967	586	1 106	17 164	81 674	23 908	105 304	15 803
Ohio	2	172	41	3 903	146 736	2 842	5 380	92 341	307 500	109 879	421 821	11 538
Oklahoma	4	21	1	150	5 282	108	208	3 719	12 845	4 625	16 914	2 849
Oregon	—	12	3	249	9 380	123	261	4 694	29 509	15 842	44 437	685
Pennsylvania	1	112	26	2 460	96 740	1 596	3 076	57 042	221 967	81 795	306 402	9 956
Rhode Island	2	17	6	516	23 271	292	543	13 637	31 152	23 118	54 979	670
South Carolina	1	45	18	1 514	54 125	1 153	2 302	37 767	105 714	73 599	180 885	12 454
Tennessee	1	28	6	1 074	44 926	775	1 496	26 328	136 179	16 980	153 398	1 532
Texas	4	57	11	1 049	39 775	784	1 494	26 802	114 277	54 967	171 121	3 444
Vermont	—	15	8	704	24 041	546	1 058	17 106	46 892	14 042	61 173	2 839
Virginia	—	7	3	196	7 332	162	309	5 528	25 613	13 009	38 604	121
Washington	2	16	4	649	32 158	337	600	11 533	85 947	35 672	119 234	6 703
Wisconsin	—	69	17	1 997	87 356	1 053	2 144	35 227	126 032	104 999	255 979	13 807

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
333515, Cutting tool and machine tool accessory manufacturing	
Companies ¹	number.. 1 803
All establishments ²	number.. 1 890
Establishments with 1 to 19 employees	number.. 1 449
Establishments with 20 to 99 employees	number.. 356
Establishments with 100 employees or more	number.. 85
All employees ³	number.. 39 606
Total compensation	\$1,000.. 1 901 366
Annual payroll	\$1,000.. 1 536 037
Total fringe benefits	\$1,000.. 365 329
Production workers, average for year	number.. 27 467
Production workers on March 12	number.. 27 666
Production workers on May 12	number.. 27 814
Production workers on August 12	number.. 27 174
Production workers on November 12	number.. 27 155
Production worker hours	\$1,000.. 53 289
Production worker wages	\$1,000.. 942 178
Total cost of materials	\$1,000.. 1 492 222
Materials, parts, containers, packaging, etc., used	\$1,000.. 1 123 789
Resales	\$1,000.. 211 164
Purchased fuels	\$1,000.. 8 892
Purchased electricity	\$1,000.. 60 836
Contract work	\$1,000.. 87 541
Quantity of electricity purchased for heat and power	1,000 kWh.. 924 959
Quantity of electricity generated less sold for heat and power	1,000 kWh.. D
Total value of shipments	\$1,000.. 4 859 363
Primary products value of shipments	\$1,000.. 4 220 191
Secondary products value of shipments	\$1,000.. 202 007
Total miscellaneous receipts	\$1,000.. 437 165
Value of resales	\$1,000.. 307 651
Contract receipts	\$1,000.. 72 171
Other miscellaneous receipts	\$1,000.. 57 343
Primary products specialization ratio	percent.. 95
Value of primary products shipments made in all industries	\$1,000.. 4 454 993
Value of primary products shipments made in this industry	\$1,000.. 4 220 191
Value of primary products shipments made in other industries	\$1,000.. 234 802
Coverage ratio	percent.. 95
Value added	\$1,000.. 3 332 990
Total inventories, beginning of year	\$1,000.. 1 008 881
Finished goods inventories	\$1,000.. 554 704
Work-in-process inventories	\$1,000.. 222 766
Materials and supplies inventories	\$1,000.. 231 411
Total inventories, end of year	\$1,000.. 950 745
Finished goods inventories	\$1,000.. 534 078
Work-in-process inventories	\$1,000.. 209 241
Materials and supplies inventories	\$1,000.. 207 426
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. '3 096 555
Total capital expenditures (new and used)	\$1,000.. '196 719
Buildings and other structures (new and used)	\$1,000.. '19 117
Machinery and equipment (new and used)	\$1,000.. '177 602
Automobiles, trucks, etc., for highway use	\$1,000.. '5 946
Computers and peripheral data processing equipment	\$1,000.. '13 146
All other expenditures for machinery and equipment	\$1,000.. '158 510
Total retirements	\$1,000.. '217 856
Gross value of depreciable assets at end of year	\$1,000.. '3 075 418
Depreciation charges during year	\$1,000.. '207 051
Total rental payments	\$1,000.. 88 587
Buildings and other structures	\$1,000.. 47 325
Machinery and equipment	\$1,000.. 41 262
Total other expenses ⁴	\$1,000.. 306 309
Response coverage ratio ⁵	percent.. 75
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 35 575
Communications services ⁴	\$1,000.. 13 387
Legal services ⁴	\$1,000.. 6 956
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 5 883
Advertising and promotional services ⁴	\$1,000.. 21 512
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 6 956
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 4 117
Management consulting and administrative services ⁴	\$1,000.. 10 597
Taxes and license fees ⁴	\$1,000.. 18 213
All other expenses ⁴	\$1,000.. 183 113

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
333515, Cutting tool and machine tool accessory manufacturing											
All establishments	2	1 890	39 606	1 536 037	27 467	53 289	942 178	3 332 990	1 492 222	4 859 363	'196 719
Establishments with—											
1 to 4 employees	9	782	1 575	54 789	1 146	1 992	35 393	111 286	48 644	161 894	'2 860
5 to 9 employees	5	327	2 216	81 106	1 567	3 001	53 906	164 713	74 653	240 022	'7 812
10 to 19 employees	4	340	4 633	171 117	3 281	6 188	111 238	354 378	149 308	506 590	'19 423
20 to 49 employees	2	272	8 198	310 221	5 853	11 606	198 865	641 495	266 995	925 617	'37 409
50 to 99 employees	2	84	5 828	218 772	4 044	7 905	130 108	502 439	203 174	716 775	'26 454
100 to 249 employees	1	66	9 794	394 705	6 910	13 309	249 999	906 573	463 918	1 393 953	'61 711
250 to 499 employees	1	15	5 111	197 951	3 481	6 873	118 015	448 260	184 846	628 209	'27 028
500 to 999 employees	2	4	2 251	107 376	1 185	2 415	44 654	203 846	100 684	286 303	'14 022
1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	913	4 052	151 071	3 020	5 700	100 167	324 459	160 608	481 823	'10 142

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
333515	Cutting tool and machine tool accessory manufacturing	1 890	39 606	1 536 037	27 467	53 289	942 178	3 332 990	1 492 222	4 859 363	'196 719
3335151	Small cutting tools for machine tools and metalworking machinery	468	24 263	936 650	17 186	33 404	599 921	2 100 948	928 932	3 054 203	'147 905
3335153	Other attachments and accessories for machine tools and metalworking machinery	150	7 318	311 910	4 452	8 945	154 190	669 134	305 785	984 205	'27 971

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333515	Cutting tool and machine tool accessory manufacturing	2002.. N 1997.. N	X X	X X	4 454 993 5 001 706
3335151	Small cutting tools for machine tools and metalworking machinery	2002.. N 1997.. N	X X	X X	2 863 336 3 253 414
33351511	Other cutting tools for machine tools, except tips and blanks sold separately	2002.. N 1997.. N	X X	X X	794 938 592 055
3335151102	Broaches (excluding holders and burnishing bars) for machine tools and metalworking machinery	2002.. 61 1997.. 50	X X	X X	303 502 114 416
3335151124	Carbon steel and high-speed steel reamers (all types, except gun reamers) for machine tools and metalworking machinery, including blades sold separately	2002.. 33 1997.. 40	X X	X X	45 219 62 963
3335151126	Solid and tipped carbide reamers (all types, except gun reamers) for machine tools and metalworking machinery (including replaceable blades sold separately) (excluding tips and blanks sold separately)	2002.. 66 1997.. 51	X X	X X	135 048 47 497
3335151128	Hobs (all types) for machine tools and metalworking machinery	2002.. 8 1997.. 6	X X	X X	36 289 D
3335151132	Gear shaper cutters and gear shaving cutters for machine tools and metalworking machinery	2002.. 11 1997.. 8	X X	X X	27 003 D
3335151148	Single and double point cutting tools for machine tools and metalworking machinery	2002.. 28 1997.. 27	X X	X X	53 374 42 519
3335151152	Circular form cutting tools (including semifinished blanks) for machine tools and metalworking machinery	2002.. 28 1997.. 24	X X	X X	36 530 30 305
3335151188	All other miscellaneous solid and tipped carbide cutting tools for machine tools (except tips and blanks sold separately) (including rotary burrs, rotary files, spade drills)	2002.. 69 1997.. 79	X X	X X	157 973 219 692
33351512	Carbon steel and high-speed steel shank twist drills for machine tools and metalworking machinery (excluding combines drills, countersinks, and gun drills)	2002.. N 1997.. N	X X	X X	262 343 341 962
3335151204	Carbon steel and high-speed steel taper shank twist drills for machine tools and metalworking machinery (excluding combined drills, countersinks, and gun drills)	2002.. 15 1997.. 23	X X	X X	13 841 26 751
3335151206	Carbon steel and high-speed steel straight shank twist drills for machine tools and metalworking machinery (excluding combined drills, countersinks, and gun drills)	2002.. 34 1997.. 39	X X	X X	248 502 315 211
33351513	Twist drills, gun drills, combined drills, countersinks, and counterbores	2002.. N 1997.. N	X X	X X	302 164 305 078
3335151308	Masonry twist drill bits for machine tools and metalworking machinery (excluding combined drills, countersinks, and gun drills)	2002.. 9 1997.. 11	X X	X X	38 713 48 788
3335151312	Solid and tipped carbide twist drills for machine tools and metalworking machinery (excluding combined drills, countersinks, gun drills, tips and blanks sold separately, and masonry drills)	2002.. 42 1997.. 41	X X	X X	144 070 143 303
3335151314	Gun drills and gun reamers for machine tools and metalworking machinery	2002.. 16 1997.. 16	X X	X X	31 714 27 365
3335151316	Combination drills and countersinks for machine tools and metalworking machinery	2002.. 22 1997.. 27	X X	X X	57 103 48 813
3335151318	Countersinks (including port cutters, etc.) for machine tools and metalworking machinery (except combined drills-countersinks and pilots for interchangeable pilots)	2002.. 20 1997.. 27	X X	X X	19 731 18 690
3335151322	Counterbores (including spot facers, etc.) for machine tools and metalworking machinery (excluding pilots for interchangeable pilot types)	2002.. 21 1997.. 38	X X	X X	10 833 18 119
33351514	End mills and milling cutters	2002.. N 1997.. N	X X	X X	457 867 455 235
3335151434	High-speed steel end mills (excluding inserted blade types and shell mills) for machine tools and metalworking machinery	2002.. 24 1997.. 49	X X	X X	139 928 129 351
3335151436	Solid and tipped carbide end mills (excluding inserted blade types, shell mills, and blades sold separately) for machine tools and metalworking machinery	2002.. 53 1997.. 61	X X	X X	143 048 166 787
3335151438	Nonindexible inserted blade type milling cutters (all types, complete) for machine tools and metalworking machinery	2002.. 12 1997.. 16	X X	X X	25 556 7 647
3335151442	Indexible and throwaway insert type milling cutters (all types, complete) for machine tools and metalworking machinery	2002.. 24 1997.. 27	X X	X X	99 125 43 860
3335151444	All other miscellaneous high-speed steel milling cutters, for machine tools and metalworking machinery	2002.. 19 1997.. 27	X X	X X	43 017 79 377
3335151446	All other miscellaneous solid and tipped carbide milling cutters, for machine tools and metalworking machinery (excluding tips and blanks sold separately)	2002.. 14 1997.. 33	X X	X X	7 193 28 213
33351515	Threading tools, including blanks, tips, and inserts	2002.. N	X	X	620 351

See footnotes at end of table.

Table 6a. **Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333515	Cutting tool and machine tool accessory manufacturing—Con.				
3335151	Small cutting tools for machine tools and metalworking machinery—Con.				
33351515	Threading tools, including blanks, tips, and inserts—Con.				
3335151554	1997.. Dies, with two or more thread-forming edges integral with the body (excluding metalworking dies) for machine tools and metalworking machinery	N	X	X	892 902
	2002..	8	X	X	33 217
	1997..	9	X	X	14 375
3335151558	Chasers, single edge thread-cutting, circular blade and tangent types for mount in-on holders, die heads, and tap bodies for machine tools and metalworking machinery	10	X	X	64 894
	2002..	15	X	X	40 250
	1997..				
3335151562	Molded blanks and tips (excluding pressed-to-size inserts) for machine tools and metalworking machinery	11	X	X	92 301
	2002..	21	X	X	123 005
	1997..				
3335151564	Other carbide indexable and throwaway inserts for machine tools and metalworking machinery	16	X	X	123 648
	2002..	23	X	X	289 153
	1997..				
3335151568	Carbide inserts (except indexable and throwaway types) for machine tools and metalworking machinery	12	X	X	42 499
	2002..	23	X	X	78 528
	1997..				
3335151572	Thread-rolling dies (including circular, flat, and planetary) for machine tools and metalworking machinery	9	X	X	11 317
	2002..	13	X	X	57 666
	1997..				
3335151574	Other threading tools (including screw plates and threading sets) for machine tools and metalworking machinery	11	X	X	15 036
	2002..	8	X	X	4 664
	1997..				
3335151576	All other miscellaneous carbon steel cutting tools for machine tools (including rotary burrs, rotary files, and spade drills)	20	X	X	81 734
	2002..	22	X	X	74 416
	1997..				
3335151578	All other miscellaneous high-speed steel cutting tools for machine tools (including rotary burrs, rotary files, and spade drills)	28	X	X	68 012
	2002..	51	X	X	89 847
	1997..				
3335151582	Ceramic indexable and throwaway inserts for machine tools and metalworking machinery	8	X	X	54 431
	2002..	11	X	X	38 737
	1997..				
3335151584	Indexable and throwaway inserts (except carbide and ceramic) for machine tools and metalworking machinery	10	X	X	18 043
	2002..	11	X	X	D
	1997..				
3335151586	Ceramic inserts (except indexable and throwaway types) for machine tools and metalworking machinery	—	X	X	191
	2002..	3	X	X	D
	1997..				
3335151592	All other inserts (except carbide and ceramic, and indexable and throwaway) for machine tools and metalworking machinery	7	X	X	15 028
	2002..	14	X	X	35 521
	1997..				
33351516	Taps (excluding taps in threading sets and screw plates and inserted chaser types) for machine tools and metalworking machinery	N	X	X	122 199
	2002..	N	X	X	179 039
	1997..				
3335151656	Taps (excluding taps in threading sets and screw plates and inserted chaser types) for machine tools and metalworking machinery	17	X	X	122 199
	2002..	31	X	X	179 039
	1997..				
33351517	Precision ground carbide indexable and throwaway inserts for machine tools and metalworking machinery	N	X	X	217 445
	2002..	N	X	X	366 607
	1997..				
3335151766	Precision ground carbide indexable and throwaway inserts for machine tools and metalworking machinery	46	X	X	217 445
	2002..	73	X	X	366 607
	1997..				
3335151Y	Small cutting tools for machine tools and metalworking machinery, nsk	N	X	X	86 029
	2002..	N	X	X	120 536
	1997..				
3335151YVV	Small cutting tools for machine tools and metalworking machinery, nsk	N	X	X	86 029
	2002..	N	X	X	120 536
	1997..				
3335153	Other attachments and accessories for machine tools and metalworking machinery	N	X	X	962 808
	2002..	N	X	X	1 085 230
	1997..				
33351531	Other attachments and accessories for machine tools and metalworking machinery	N	X	X	910 020
	2002..	N	X	X	1 038 558
	1997..				
3335153101	Holders for turning tools, mechanically clamping for inserts and bits (except box tools and screw machine tool holders) for machine tools and metalworking machinery	31	X	X	127 147
	2002..	52	X	X	125 623
	1997..				
3335153106	Holders for boring bars and heads for machine tools and metalworking machinery	17	X	X	25 519
	2002..	34	X	X	72 632
	1997..				
3335153111	Holders for drilling, reaming, and tapping chucks for machine tools and metalworking machinery	19	X	X	59 732
	2002..	17	X	X	129 163
	1997..				
3335153116	Holders for special tooling and attachments for screw and automatic machines (box tools, tool holders, turrets, rollers, etc.)	42	X	X	144 890
	2002..	41	X	X	52 711
	1997..				
3335153121	Holders for die heads and tap bodies for chaser-type threading and thread-rolling heads (excluding hand-type die stocks)	7	X	X	18 738
	2002..	15	X	X	16 805
	1997..				
3335153126	Other tool holders, including chucks, drill heads, tool posts, turrets, sleeves, sockets, etc.	22	X	X	68 545
	2002..	27	X	X	84 405
	1997..				
3335153131	Tracer and tapering attachments, safety devices, centers, dogs, work rests, chutes, etc., for machine tools and metalworking machinery	4	X	X	26 395
	2002..	12	X	X	24 807
	1997..				

See footnotes at end of table.

Table 6a. Products Statistics: 2002 and 1997—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333515	Cutting tool and machine tool accessory manufacturing—Con.				
3335153	Other attachments and accessories for machine tools and metalworking machinery—Con.				
33351531	Other attachments and accessories for machine tools and metalworking machinery—Con.				
3335153136	Lathe chucks for machine tools and metalworking machinery	2002.. 7	X	X	18 494
		1997.. 12	X	X	23 829
3335153146	Rotary tables, including numerically controlled	2002.. 11	X	X	20 986
		1997.. 12	X	X	15 637
3335153152	Indexing work holders, excluding rotary tables	2002.. 9	X	X	29 225
		1997.. 13	X	X	36 912
3335153154	Collets, jaws, vises	2002.. 37	X	X	75 501
		1997.. 47	X	X	113 046
3335153156	Tool room specialties (including levels, angle plates, parallels, sine bars, V-blocks, flats, etc.) for machine tools and metalworking machinery	2002.. 10	X	X	21 383
		1997.. 17	X	X	35 798
3335153166	Collets, jaws, and vises, including mandrels, feeding fingers clamps, stops, etc.	2002.. 19	X	X	33 333
		1997.. 49	X	X	98 410
3335153176	All other attachments and accessories for machine tools and metalworking machinery	2002.. 74	X	X	240 132
		1997.. 88	X	X	208 780
3335153Y	Other attachments and accessories for machine tools and metalworking machinery, nsk	2002.. N	X	X	52 788
		1997.. N	X	X	46 672
3335153YWV	Other attachments and accessories for machine tools and metalworking machinery, nsk	2002.. N	X	X	52 788
		1997.. N	X	X	46 672
333515W	Cutting tool and machine tool accessory manufacturing, nsk, total	2002.. N	X	X	628 849
		1997.. N	X	X	663 062
333515WY	Cutting tool and machine tool accessory manufacturing, nsk, total	2002.. N	X	X	628 849
		1997.. N	X	X	663 062
333515WYWW	Cutting tool and machine tool accessory manufacturing, nsk, for nonadministrative-record establishments	2002.. N	X	X	239 198
		1997.. N	X	X	364 069
333515WYWY	Cutting tool and machine tool accessory manufacturing, nsk, for administrative-record establishments	2002.. N	X	X	389 651
		1997.. N	X	X	298 993

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p–10 to 19 percent estimated; q–20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3335151	Small cutting tools for machine tools and metalworking machinery	
	United States 2002 . .	2 863 336
	United States 1997 . .	3 253 414
	California 2002 . .	198 191
	California 1997 . .	155 808
	Connecticut 2002 . .	43 277
	Connecticut 1997 . .	65 502
	Florida 2002 . .	68 105
	Florida 1997 . .	30 729
	Illinois 2002 . .	308 679
	Illinois 1997 . .	415 276
	Indiana 2002 . .	38 008
	Indiana 1997 . .	61 977
	Iowa 2002 . .	22 515
	Iowa 1997 . .	26 596
	Kentucky 2002 . .	5 553
	Kentucky 1997 . .	7 454
	Massachusetts 2002 . .	91 445
	Massachusetts 1997 . .	81 510
	Michigan 2002 . .	487 045
	Michigan 1997 . .	506 710
	Missouri 2002 . .	25 920
	Missouri 1997 . .	28 355
	New York 2002 . .	40 904
	New York 1997 . .	63 613
	North Carolina 2002 . .	32 788
	North Carolina 1997 . .	83 601
	Ohio 2002 . .	263 822
	Ohio 1997 . .	454 973
	Oklahoma 2002 . .	3 819
	Oklahoma 1997 . .	N
	Pennsylvania 2002 . .	168 335
	Pennsylvania 1997 . .	260 024
	Rhode Island 2002 . .	41 585
	Rhode Island 1997 . .	15 870
	South Carolina 2002 . .	115 581
	South Carolina 1997 . .	227 090
	Tennessee 2002 . .	132 735
	Tennessee 1997 . .	95 285
	Texas 2002 . .	144 487
	Texas 1997 . .	56 268
	Vermont 2002 . .	43 676
	Vermont 1997 . .	53 506
	Washington 2002 . .	6 133
	Washington 1997 . .	N
	Wisconsin 2002 . .	133 739
	Wisconsin 1997 . .	155 868
3335153	Other attachments and accessories for machine tools and metalworking machinery	
	United States 2002 . .	962 808
	United States 1997 . .	1 085 230
	California 2002 . .	36 844
	California 1997 . .	24 369
	Connecticut 2002 . .	22 508
	Connecticut 1997 . .	29 657
	Florida 2002 . .	2 953
	Florida 1997 . .	2 615
	Illinois 2002 . .	38 341
	Illinois 1997 . .	84 885
	Indiana 2002 . .	18 699
	Indiana 1997 . .	21 407
	Iowa 2002 . .	10 416
	Iowa 1997 . .	N
	Massachusetts 2002 . .	5 211
	Massachusetts 1997 . .	40 496
	Michigan 2002 . .	177 080
	Michigan 1997 . .	263 145
	Missouri 2002 . .	83 189
	Missouri 1997 . .	N
	New York 2002 . .	62 312
	New York 1997 . .	87 092
	North Carolina 2002 . .	54 016
	North Carolina 1997 . .	33 999
	Ohio 2002 . .	90 330
	Ohio 1997 . .	125 653
	Pennsylvania 2002 . .	55 295
	Pennsylvania 1997 . .	43 759
	South Carolina 2002 . .	53 190
	South Carolina 1997 . .	N
	Tennessee 2002 . .	10 733
	Tennessee 1997 . .	10 824
	Texas 2002 . .	9 770
	Texas 1997 . .	53 438
	Wisconsin 2002 . .	95 755
	Wisconsin 1997 . .	24 558

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
333515	Cutting tool and machine tool accessory manufacturing		
00900001	Total materials .....2002..	X	1 123 789
	.....1997..	X	1 365 433
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....2002..	X	18 041
	.....1997..	X	37 492
33200095	Other fabricated metal products (excluding castings and forgings) .....2002..	X	46 958
	.....1997..	X	56 759
33210000	Forgings .....2002..	X	2 041
	.....1997..	X	N
33151001	Iron and steel castings (rough and semifinished) .....2002..	X	29 705
	.....1997..	X	50 575
33152011	Nonferrous (aluminum, copper, etc.) castings (rough and semifinished) .....2002..	X	5 954
	.....1997..	X	4 282
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....2002..	X	172 221
	.....1997..	X	283 838
33120016	Steel sheet and strip (including tinplate) .....2002..	X	7 048
	.....1997..	X	N
33120033	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	30 242
	.....1997..	X	25 244
33131500	Aluminum and aluminum-base alloy sheet, plate, foil, and welded tubing .....2002..	X	1 996
	.....1997..	X	N
33100055	All other aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	6 489
	.....1997..	X	6 922
33100077	Other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	13 261
	.....1997..	X	7 697
33149200	Tungsten carbide metal powders .....2002..	X	203 453
	.....1997..	X	267 727
331000AC	All other metal powders .....2002..	X	3 174
	.....1997..	X	8 607
32799903	Industrial diamonds .....2002..	X	30 975
	.....1997..	X	40 395
001900B1	Electrical transmission, distribution, and control equipment .....2002..	X	11 067
	.....1997..	X	19 222
32791001	Grinding wheels and other abrasive products, excluding industrial diamonds .....2002..	X	38 662
	.....1997..	X	56 985
00190090	Fluid power products .....2002..	X	11 382
	.....1997..	X	29 673
33351503	Cutting tools for machine tools .....2002..	X	37 384
	.....1997..	X	N
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	225 461
	.....1997..	X	236 146
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	228 275
	.....1997..	X	233 869

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.